

Hearing Loss Prevention (Noise)

WAC 296-817-600

Definitions

A-weighted

An adjustment to sound level measurements that reflects the sensitivity of the human ear. Used for evaluating continuous or average noise levels.

Audiogram

A chart, graph, or table resulting from an audiometric test showing an individual's hearing threshold levels as a function of frequency.

Audiologist

A professional, specializing in the study and rehabilitation of hearing, who is certified by the American Speech, Hearing, and Language Association, or the American Academy of Audiology, and is licensed by the state board of examiners.

Baseline audiogram

The audiogram against which future audiograms are compared. The baseline audiogram is collected when an employee is first assigned to work with noise exposure. The baseline audiogram may be revised if persistent standard threshold shift (STS) of improvement is found.

Continuous noise

Noise with peaks spaced no more than one second apart. Continuous noise is measured using sound level meters and noise dosimeters with the slow response setting.

Criterion sound level

A sound level of 90 decibels. An 8-hour exposure to constant 90 dBA noise is a 100% noise dose exposure.

C-weighted

An adjustment to sound level measurements that evenly represents frequencies within the range of human hearing. Used for evaluating impact or impulse noise.

Decibel (dB)

Unit of measurement of sound level. A-weighting, adjusting for the sensitivity of the human ear, is indicated as "dBA." C-weighting, an even reading across the frequencies of human hearing, is indicated as "dBC."

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Fast response

A setting for a sound level meter that will allow the meter to respond to noise events of less than one second. Used for evaluating impulse and impact noise levels.

Hertz (Hz)

Unit of measurement of frequency, numerically equal to cycles per second.

Impulsive or impact noise

Noise levels which involve maxima at intervals greater than one second. Impulse and impact noise are measured using the fast response setting on a sound level meter.

Noise dose

The total noise exposure received by an employee during their shift. It can be expressed as a percentage indicating the ratio of exposure received to the noise exposure received in an 8-hour exposure to constant noise at 90 dBA. It may also be expressed as the sound level that would produce the equivalent exposure during an 8-hour period (TWA_8).

Noise dosimeter

An instrument that integrates a function of sound pressure over a period of time in such a manner that it directly indicates a noise dose.

Occupational hearing loss

A reduction in the ability of an individual to hear either caused or contributed to by exposure in the work environment.

Otolaryngologist

A physician specializing in diagnosis and treatment of disorders of the ear, nose and throat.

Permanent threshold shift

A hearing level change that has become persistent and isn't expected to improve.

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Qualified reviewer

An audiologist, otolaryngologist, or other qualified physician who has experience and training in evaluating occupational audiograms.

Slow response

A setting for sound level meters and dosimeters in which the meter doesn't register events of less than about one second. Used for evaluating continuous and average noise levels.

Sound level

The intensity of noise as indicated by a sound level meter.

Sound level meter

An instrument that measures sound levels.

Standard threshold shift (STS)

A hearing level change, relative to the baseline audiogram, of an average of 10 dB or more at 2000, 3000, and 4000 Hz in either ear.

Temporary threshold shift

A hearing level change that improves. A temporary threshold shift may occur with exposure to noise and hearing will return to normal within a few days. Temporary threshold shifts can be indicators of exposures that lead to permanent hearing loss.

TWA₈ - Equivalent eight-hour time-weighted average sound level

That sound level, which if constant over an eight-hour period, would result in the same noise dose measured in an environment where the noise level varies.



Notes
